July 10, 2003

Mr. William Grimes
Gartland Foundry Company
330 Grant Street
P.O. Box 1564
Terre Haute, Indiana 47808

Re: 167-17187-00007
Significant Permit Modification to:
Part 70 permit No.: T167-5998-00007

Dear Mr. Grimes:

Gartland Foundry was issued Part 70 operating permit T167-5998-00007 on September 27, 2000 for a grey iron foundry. An application to modify the source was received on October 23, 2002. Pursuant to 326 IAC 2-7-10.5 the following emission units are approved for operation at the source:

(a) Isocure Core Machine, identified as EU 220, fed by mixer 1, with a maximum capacity of 0.625 tons per hour, controlled by an acid scrubber, and exhausting to stack SC-8. (Existing)

(b) Isocure Core Machine, identified as EU 221, fed by mixer 1, with a maximum capacity of 0.625 tons per hour, controlled by an acid scrubber, and exhausting to stack SC-8. (Existing)

(c) Isocure Core Machine, identified as EU 222, fed by mixer 2, with a maximum capacity of 0.525 tons per hour, controlled by an acid scrubber, and exhausting to stack SC-8. (Existing)

(d) Cold Box (Isocure) Core Machine, identified as CBCM-1, fed by mixer 2, with a maximum capacity of 1 ton per hour, controlled by an acid scrubber, and exhausting to stack SC-8.

(e) Cold Box (Isocure) Core Machine, identified as CBCM-2, fed by mixer 2, with a maximum capacity of 1 ton per hour, controlled by an acid scrubber, and exhausting to stack SC-8.

(f) Sand Mixer, identified as mixer 2.

(g) Sand heater

(h) Bin Vent for control of existing sand silo

The operating conditions applicable to these emission units are attached to this Permit Modification approval. These operating conditions are incorporated into the Part 70 operating permit through this approval.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter call (812) 462-3433 and ask for Rob Harmon or extension 14.

Sincerely,

Original Signed by George M. Needham
George M. Needham
Director
Vigo County Air Pollution Control

Attachments
RKH
cc: Mindy Hahn - IDEM-OAQ, Permit Branch
Winter Bottum - IDEM-OAQ

PART 70 OPERATING PERMIT

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT - OFFICE OF AIR QUALITY
and
VIGO COUNTY AIR POLLUTION CONTROL

Gartland Foundry Company
330 Grant Street
Terre Haute, Indiana 47802

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this permit.

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

Operation Permit No.: T167-5998-00007	
Issued by: Janet G. McCabe, Assistant Commissioner Office of Air Quality	Issuance Date: September 27, 2000 Expiration Date: September 27, 2005
First Administrative Amendment	Issuance Date: April 25, 2001
First Significant Source Modification	Issuance Date: August 3, 2001
First Significant Permit Modification T167-14215	Issuance Date: August 29, 2001
Second Significant Source Modification T167-16913	Issuance Date: June 3, 2003
Second Significant Permit Modification T167-17187	Pages Affected: 3, 4, 5, 6, 7and 32 through 46
Issued by: Original Signed by George M. Needham George M. Needham, Director Vigo County Air Pollution Control	Issuance Date: July 10, 2003

SECTION D.2 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]:

Two (2) Electric Induction Furnaces as follows:

1. EU130, consisting of induction furnace #3, with a maximum capacity of 5.0 tons of metal per hour, using baghouse BH1 for control, and exhausting to stack SC-2.

2. EU140, consisting of induction furnace #4, with a maximum capacity of 5.0 tons of metal per hour, using baghouse BH1 for control, and exhausting to stack SC-2.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.2.1 Particulate Matter (PM) [326 IAC 6-3]

Pursuant to OP 07-3321-03-95, issued on August 21, 1995, the particulate matter (PM) emissions from Electric Induction Furnaces #3 and #4 shall be limited to 0.02 grains per dry standard cubic foot at an air flow rate of 20,000 cubic feet per minute. PM is also limited to 2.98 pounds per hour, and 13.04 tons per year.

These limits also satisfy the requirements of 326 IAC 2-2, for minor modifications to a major PSD source.

D.2.2 Housekeeping

Pursuant to OP-07-3321-03-95, the charge materials for electric induction furnaces #3 and #4 shall be stored inside a building. Also, visible emissions from any building opening shall not exceed 20% opacity, as determined by 40 CFR 60 Appendix A, Method 9 and 326 IAC 5-1.

D.2.3 PSD Minor Limit [326 IAC 2-2]

The input of metal to the induction furnaces (EU130 and EU140 combined) shall be less than 20,921 tons per 12 consecutive month period with compliance determined at the end of each month. This usage limit (combined with others throughout this approval) is required to limit the potential to emit of particulate matter for Gartland Foundry to less than 100 tons per 12 consecutive month period. Compliance with this limit makes 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable.

D.2.4 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these facilities and their control device***s***.

Compliance Determination Requirements

D.2.5 Testing Requirements [326 IAC 2-7-6(1),(6)][326 IAC 2-1.1-11]

During the period between 24 and 30 months after issuance of this permit, the Permittee shall perform PM testing on each Electric Induction Furnace utilizing Methods 5 or 17 (40 CFR 60, Appendix A) for PM or other methods as approved by the Commissioner. This test shall be repeated at least once every five years from the date of this valid compliance demonstration. In addition to these requirements, IDEM and VCAPC may require compliance testing when necessary to determine if the facility is in compliance.

D.2.6 Particulate Matter (PM)

Pursuant to OP-07-3321-03-95, issued on August 21, 1995, the baghouse for PM control shall be in operation and control emissions from the Electric Induction Furnaces #3 and #4 are in operation.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.2.7 Visible Emissions Notations

(a) Daily visible emission notations of the Electric Induction Furnace stack (SC-2) exhaust shall be performed during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

(e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.

D.2.8 Parametric Monitoring

The Permittee shall record the total static pressure drop across the baghouse (BH1) used in conjunction with the Electric Induction Furnaces #3 and #4, at least once per shift when either Electric Induction Furnace is in operation and venting to the atmosphere. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the pressure drop across the baghouse shall be maintained within the range of 1.0 to 6.0 inches of water or a range established during the latest stack test. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any one reading.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge Specifications, of this permit, shall be subject to approval by IDEM, OAQ and VCAPC, and shall be calibrated at least once every six (6) months.

D.2.9 Baghouse Inspections

An inspection shall be performed each calender quarter of all bags controlling the Electric Induction Furnace operation when venting to the atmosphere. A baghouse inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting to the indoors. All defective bags shall be replaced.

D.2.10 Broken or Failed Bag Detection

In the event that bag failure has been observed:

(a) The affected compartments will be shut down immediately until the failed units have been repaired or replaced. Within eight (8) hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) hours of discovery of the failure and shall include a timetable for completion. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

(b) For single compartment baghouses, failed units and the associated processes will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.2.11 Record Keeping Requirements

(a) To document compliance with Condition D.2.7, the Permittee shall maintain records of daily visible emission notations of the Electric Induction Furnace stack exhaust.

(b) To document compliance with Condition D.2.1 and D.2.8, the Permittee shall maintain the following:
  (1) Daily records of the following operational parameters during normal operation when venting to the atmosphere:
    (A) Inlet and outlet differential static pressure; and
    (B) Cleaning cycle: frequency and differential pressure.
  (2) Documentation of all response steps implemented, per event .
  (3) Operation and preventive maintenance logs, including work purchases orders, shall be maintained.
  (4) Quality Assurance/Quality Control (QA/QC) procedures.
  (5) Operator standard operating procedures (SOP).
  (6) Manufacturer's specifications or its equivalent.
  (7) Equipment "troubleshooting" contingency plan.
  (8) Documentation of the dates vents are redirected.

(b) To document compliance with Condition D.2.9, the Permittee shall maintain records of the results of the inspections required under Condition D.2.9 and the dates the vents are redirected.

(c) To document compliance with Condition D.2.3, the Permittee shall maintain records of the weight of metal melted each day. The records shall be complete and sufficient to establish compliance with the melting use limitation in Condition D.2.3.

(d) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.2.12 Reporting Requirements

(a) A summary of the information to document compliance with Conditions D.2.1, D.2.6, D.2.7, D.2.8, and D.2.9 shall be submitted to the addresses listed in Section C - General Reporting Requirements, of this permit, upon request.

(b) A quarterly summary of the information to document compliance with Condition D.2.3 shall be submitted to the addresses listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).

SECTION D.3 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]:

One (1) electrostatic spray booth, identified as prime paint line EU710, with a maximum capacity of 500 grey iron castings per hour, with dry filters for control of particulate matter overspray, and exhausting to stack SC-6.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.3.1 Volatile Organic Compounds (VOC) [326 IAC 8-2-9] [326 IAC 2]

(a) The volatile organic compound (VOC) content of coating delivered to the applicator at Spray Booth EU710 shall be limited to 3.5 pounds of VOCs per gallon of coating less water, for extreme performance coatings.

(b) Any change or modification which may increase potential emissions to 25 tons per twelve (12) consecutive month period, from the equipment covered in Section D.5 of this permit, shall require prior approval from OAQ and VCAPC before such change may occur.

D.3.2 Emission Minimization [326 IAC 8-2-9]

Solvent sprayed from application equipment during cleanup or color changes shall be directed into containers. Such containers shall be closed as soon as such solvent spraying is complete, and the waste solvent shall be disposed of in such a manner that evaporation is minimized.

D.3.3 Particulate Matter (PM) [326 IAC 6-1-2]

Pursuant to 326 IAC 6-1-2, the electrostatic spray booth (EU710) shall not emit particulate matter (PM) in excess of 0.03 grains per dry standard cubic foot.

D.3.4 PSD Minor Limit [326 IAC 2-2]

The input of paint to the electrostatic spray booth (EU710) shall be less than 14,000 gallons per 12 consecutive month period with compliance determined at the end of each month. This usage limit (combined with others throughout this approval) is required to limit the potential to emit of particulate matter for Gartland Foundry to less than 100 tons per 12 consecutive month period. Compliance with this limit makes 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable.

D.3.5 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for this facility and its control device.

Compliance Determination Requirements

D.3.6 Volatile Organic Compounds (VOC)

Compliance with the VOC content and usage limitations contained in Condition D.3.1 and D.3.4 shall be determined pursuant to 326 IAC 8-1-4(a)(3)(A) using formulation data supplied by the coating manufacturer. However, IDEM, OAQ, and VCAPC reserve the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

D.3.7 Particulate Matter (PM)

The dry filters for PM overspray control from Spray Booth EU710 shall be in operation at all times when the spray booth is in operation and exhausting to the outside atmosphere.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.3.8 Monitoring

(a) Daily inspections shall be performed to verify the placement, integrity and particle loading of the filters. To

monitor the performance of the dry filters, daily observations shall be made of the overspray while the spray booth is in operation. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a violation of this permit.

(b) Weekly inspections shall be performed of the coating emissions from the stack and the presence of overspray on the rooftops and the nearby ground. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an overspray emission, or other noticeable change in overspray emission is observed. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a violation of this permit.

(c) Additional inspections and preventive measures shall be performed as prescribed in the Preventive Maintenance Plan.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.3.9 Record Keeping Requirements

(a) To document compliance with Condition D.3.1 and D.3.4, the Permittee shall maintain records in accordance with (1) through (6) below. Records maintained for (1) through (6) shall be taken daily and shall be complete and sufficient to establish compliance with the VOC usage limits and/or the VOC emission limits established in Condition D.3.1.

(1) The amount and VOC content of each coating material and solvent used. Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used. Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents;
(2) A log of the dates of use;
(3) The volume weighted VOC content of the coatings used for each day;
(4) The cleanup solvent usage for each day;
(5) The total VOC usage for each day; and
(6) The weight of VOCs emitted for each compliance period.

(b) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.3.10 Reporting Requirements

A summary of the information to document compliance with Conditions D.3.1, D.3.4,and D.3.8 shall be submitted to the addresses listed in Section C - General Reporting Requirements, of this permit, upon request.

SECTION D.4 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]:

1. Sand handling systems including:
   (a) Sand Muller, identified as EU591, with a maximum capacity of 100 tons per hour, and sand conveyor, identified as EU592, using baghouse BH5 for control, and exhausting to stack SC-7.
   (b) Casting shakeout, identified as EU570, with a maximum capacity of 8 tons per hour, using a baghouse (BH3) for control, and exhausting to stack SC-4.
   (c) Mold making process including a mold making muller (EU510), six (6) squeezer mold machines (EU520), four (4) rotolift mold machines (EU521), auto mold machine (EU530), and another auto mold machine (EU531), utilizing no control, and exhausting to SU-INT6/7/8/13.
   (d) One (1) Waste sand handling system, identified as EU760, with a maximum capacity of 2.2 tons per hour of sand, exhausting to stack SU-INT12.
   (e) One (1) Shaker/Sorter unit, identified as EU580, with a maximum capacity of 8.0 tons per hour of metal castings, using baghouse BH5 for control, and exhausting to stack SC-7.

2. One (1) Scrap/Charge Handling operation for the electric induction furnaces, identified as EU120, with a maximum capacity of 19 tons of metal per hour, and exhausting as fugitive emissions FG-1.

3. Casting Finishing:
   (a) One (1) Spin Blast, identified as EU610, with a maximum capacity of 5 tons per hour of metal castings, using baghouse BH2 for control and exhausting to stack SC-2.
   (b) One (1) Tumble Blast, identified as EU620, with a maximum capacity of 5 tons per hour of metal castings, using baghouse BH5 for control and exhausting to stack SC-7.
   (c) One (1) Tumbler, identified as EU630, with a maximum capacity of 1 ton per hour of metal castings using baghouse BH5 for control and exhausting to stack SC-7.
   (d) Four (4) Snag Grinders, identified as EU640, each with a maximum capacity of 2 tons per hour of metal castings, using baghouse BH5 for control and exhausting to stack SC-7.
   (e) Six (6) Finish Grinders, identified as EU650, each with a maximum capacity of 2 tons per hour of metal castings, using baghouse BH5 for control and exhausting to stack SC-7.

4. Core making systems including:
   (a) Three (3) Shell Core Machines, identified as EU320, EU321, and EU322 each with a maximum capacity of 1 ton per hour of sand, utilizing no controls and exhausting inside the source;
   (b) One (1) Oil Core Making Process, identified as EU410, utilizing a mixer and associated core boxes with a maximum capacity of 0.25 tons per hour of sand, utilizing no controls and exhausting inside the source; and
   (c) Core Wash Process, identified as EU730, with a maximum capacity of 1 ton per hour of sand, utilizing no controls and exhausting inside the source.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.4.1 Particulate Matter Limitation (PM) [326 IAC 2-2]

Pursuant to CP 167-V022-00007, issued on July 16, 1997, the particulate matter (PM) emissions from baghouse BH-5, controlling emissions from the sand muller, and sand conveyor, shall be limited to 0.0075 grains per dry standard cubic foot at an air flow rate of 50,000 cubic feet per minute. PM emissions are also limited to 3.21 pounds per hour, and 14.08 tons per year.

These limits also satisfy the requirements of 326 IAC 2-2, for minor modifications to a major PSD source.

D.4.2 Particulate Matter Limitation (PM) [326 IAC 6-1-2]

The facilities not listed specifically in Condition D.4.1 shall not emit particulate matter (PM) in excess of 0.03 grains per dry standard cubic foot.

D.4.3 PSD Minor Limit [326 IAC 2-2]

(a) The throughput of the casting shakeout system shall not exceed 20,921 tons per 12 consecutive month period with compliance determined at the end of each month. This usage limit (combined with others throughout this approval) is required to limit the potential to emit of particulate matter for Gartland Foundry to less than 100 tons per 12 consecutive month period. Compliance with this limit makes the requirements of 326 IAC 8-1-6 and 326 IAC 2-2 not applicable.

(b) The input of sand to the sand handling system shall be less than 562,887 tons per 12 consecutive month period with compliance determined at the end of each month. This usage limit (combined with others throughout this approval) is required to limit the potential to emit of particulate matter for Gartland Foundry to less than 100 tons per 12 consecutive month period. Compliance with this limit makes 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable.

(c) The input of metal to be cleaned in the sandblast systems (EU610 and EU620 combined) shall be less than 20,921 tons per 12 consecutive month period with compliance determined at the end of each month. This usage limit (combined with others throughout this approval) is required to limit the potential to emit of particulate matter for Gartland Foundry to less than 100 tons per 12 consecutive month period. Compliance with this limit makes 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable.

(d) The input of metal processed in the tumbler grinders (EU630 and EU640 combined) shall be less than 20,921 tons per 12 consecutive month period with compliance determined at the end of each month. This usage limit (combined with others throughout this approval) is required to limit the potential to emit of particulate matter for Gartland Foundry to less than 100 tons per 12 consecutive month period. Compliance with this limit makes 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable.

(e) The input of metal processed in the finish grinders (EU650 combined) shall be less than 20,921 tons per 12 consecutive month period with compliance determined at the end of each month. This usage limit (combined with others throughout this approval) is required to limit the potential to emit of particulate matter for Gartland Foundry to less than 100 tons per 12 consecutive month period. Compliance with this limit makes 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable.

D.4.4 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these facilities and their control devices.

Compliance Determination Requirements

D.4.5 Particulate Matter (PM)

(a) The baghouse (BH5) for PM control from the sand muller and sand conveyor shall be in operation at all times when the sand muller and sand conveyor are in operation.

(b) The baghouse (BH3) for PM control from the casting shakeout shall be in operation at all times when the casting shakeout system is in operation.

(c) The baghouse (BH2) for PM control from the spin blast shall be in operation at all times when the spin blast is in operation.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.4.6 Visible Emissions Notations

(a) Daily visible emission notations of the three baghouse (BH2, BH3, and BH5) exhausts shall be performed during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

(e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.

D.4.7 Parametric Monitoring

The Permittee shall record the total static pressure drop across the baghouse used in conjunction with sand muller and sand conveyor, at least once per shift when the sand muller and sand conveyor are in operation and when venting to the atmosphere. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the pressure drop across the baghouse shall be maintained within the range of 4.0 and 6.0 inches of water or a range established during the latest stack test. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any one reading.

The Permittee shall record the total static pressure drop across the baghouse used in conjunction with casting shakeout, at least once per shift when the casting shakeout system is in operation and when venting to the atmosphere. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the pressure drop across the baghouse shall be maintained within the range of 1.0 and 6.0 inches of water or a range established during the latest stack test. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any one reading.

The Permittee shall record the total static pressure drop across the baghouse used in conjunction with the spin blast, at least once per shift when the spin blast is in operation and when venting to the atmosphere. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the pressure drop across the baghouse shall be maintained within the range of 1.0 and 6.0 inches of water or a range established during the latest stack test. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any one reading.

The instruments used for determining the pressure shall comply with Section C - Pressure Gauge Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and Vigo County Air Pollution Control and shall be calibrated at least once every six (6) months.

D.4.8 Baghouse Inspections

An inspection shall be performed each calender quarter of all bags controlling the sand muller and sand conveyor when venting to the atmosphere. A baghouse inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting to the indoors. All defective bags shall be replaced.

An inspection shall be performed each calender quarter of all bags controlling the casting shakeout when venting to the atmosphere. A baghouse inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting to the indoors. All defective bags shall be replaced.

An inspection shall be performed each calender quarter of all bags controlling the spin blast when venting to the atmosphere. A baghouse inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting to the indoors. All defective bags shall be replaced.

D.4.9 Broken Bag or Failure Detection

In the event that bag failure has been observed:

(a) The affected compartments will be shut down immediately until the failed units have been repaired or replaced. For single compartment baghouses, failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced.

(b) Within eight (8) hours of the determination of failure, response steps according to the timetable

described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) hours of discovery of the failure and shall include a timetable for completion.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.4.10 Record Keeping Requirements

(a) To document compliance with Condition D.4.6, the Permittee shall maintain records of daily visible emission notations of the baghouses BH2, BH3 and BH5 stack exhausts.

(b) To document compliance with Condition D.4.1 and D.4.7, the Permittee shall maintain the following:
  (1) Daily records of the following operational parameters during normal operation when venting to the atmosphere:
    (A) Inlet and outlet differential static pressure; and
    (B) Cleaning cycle: frequency and differential pressure.
  (2) Documentation of all response steps implemented, per event .
  (3) Operation and preventive maintenance logs, including work purchases orders, shall be maintained.
  (4) Quality Assurance/Quality Control (QA/QC) procedures.
  (5) Operator standard operating procedures (SOP).
  (6) Manufacturer's specifications or its equivalent.
  (7) Equipment "troubleshooting" contingency plan.
  (8) Documentation of the dates vents are redirected.

(c) To document compliance with Condition D.4.3, the Permittee shall maintain records of the weight of metal handled in each process each day. The records shall be complete and sufficient to establish compliance with the melting use limitation in Condition D.4.3.

(d) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.4.11 Reporting Requirements

(a) A summary of the information to document compliance with Conditions D.4.1, D.4.2, D.4.3 and D.4.7 shall be submitted to the addresses listed in Section C - General Reporting Requirements, of this permit, upon request.

(b) A quarterly summary of the information to document compliance with Condition D.4.3(b) shall be submitted to the addresses listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).

SECTION D.5 FACILITY CONDITIONS

Facility Description [326 IAC 2-7-5(15)]:

1. Inoculation for Ductile Iron Production (Magnesium Treatment), with a maximum capacity of 10 tons of metal per hour, identified as EU150, utilizing a closed ladle for control, and exhausting to inside the source.

2. Pouring, identified as EU540, with a maximum capacity of 18 tons of metal per hour each, and exhausting as fugitive emissions FG-INT1 (vented to interior). Pouring operations are conducted on the floor, sinto molding line, and beardsley molding line. The maximum pouring capacity of the floor, sinto molding line, and beardsley molding line is 11.2, 5.0, and 3.0 tons per hour of metal, respectively.

3. Cooling, identified as EU550, with a maximum capacity of 18 tons of metal per hour each, and exhausting as fugitive emissions FG-INT1 (vented to interior). Cooling operations are conducted on the floor, sinto molding line, and beardsley molding line. The maximum cooling capacity of the floor, sinto molding line, and beardsley molding line is 11.2, 5.0, and 3.0 tons per hour of metal, respectively.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.5.1 Particulate Matter Limitation (PM) [[326 IAC 6-1-2]

Pursuant to 326 IAC 6-1-2, the facilities listed above (Inoculation, Pouring, and Cooling) shall not emit particulate matter (PM) in excess of 0.03 grains per dry standard cubic foot.

D.5.2 PSD Minor Limit [326 IAC 2-2]

The input of metal to the inoculation system (EU150) shall be less than 985 tons per 12 consecutive month period with compliance determined at the end of each month. This usage limit (combined with others throughout this approval) is required to limit the potential to emit of particulate matter for Gartland Foundry to less than 100 tons per 12 consecutive month period. Compliance with this limit makes 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable.

D.5.3 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these facilities and their control devices.

Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.5.4 Record Keeping Requirements

(a) To document compliance with Condition D.5.2, the Permittee shall maintain records of the weight of metal inoculated each day. The records shall be complete and sufficient to establish compliance with the metal use limitation in Condition D.5.2.

(b) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.5.5 Reporting Requirements

A summary of the information to document compliance with Conditions D.5.2 shall be submitted to the addresses listed in Section C - General Reporting Requirements, of this permit, upon request.

SECTION D.6 FACILITY CONDITIONS

Facility Description [326 IAC 2-7-5(15)]:

1. Isocure Core Machine, identified as EU 220, fed by mixer 1, with a maximum capacity of 0.625 tons per hour, controlled by an acid scrubber, and exhausting to stack SC-8.

2. Isocure Core Machine, identified as EU 221, fed by mixer 1, with a maximum capacity of 0.625 tons per hour, controlled by an acid scrubber, and exhausting to stack SC-8.

3. Isocure Core Machine, identified as EU 222, fed by mixer 2, with a maximum capacity of 0.525 tons per hour, controlled by an acid scrubber, and exhausting to stack SC-8.

4. Cold Box (Isocure) Core Machine, identified as CBCM-1, fed by mixer 2, with a maximum capacity of 1 ton per hour, controlled by an acid scrubber, and exhausting to stack SC-8.

5. Cold Box (Isocure) Core Machine, identified as CBCM-2, fed by mixer 2, with a maximum capacity of 1 ton per hour, controlled by an acid scrubber, and exhausting to stack SC-8.

6. Sand Mixer, identified as mixer 2.

7. Sand heater

8. Bin Vent for control of existing sand silo

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.6.1 Particulate Matter (PM) [326 IAC 6-1-2]

Pursuant to 326 IAC 6-1-2(a) particulate matter emissions shall not exceed 0.03 grain per dry standard cubic foot.

D.6.2 Triethylamine Control [326 IAC 2-2][40 CFR 52.21][326 IAC 2-4.1]

The acid scrubber shall be in operation at all times any of the associated Cold Box Core Machines (EU220, EU221, EU222, Cold Box Core Machine 1, and Cold Box Core Machine 2) are in operation.

D.6.3 PSD Minor Limit [326 IAC 2-2]

The production of cores in the isocure machines (EU220, EU221, EU222, CBCM-1 and CBCM-2 combined) shall be less than 1,100 tons per 12 consecutive month period with compliance determined at the end of each month. This usage limit (combined with others throughout this approval) is required to limit the potential to emit of particulate matter for Gartland Foundry to less than 100 tons per 12 consecutive month period. Compliance with this limit makes 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable.

D.6.4 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for this facilities and any control devices.

Compliance Determination Requirements

D.6.5 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

Within 60 days after reaching maximum capacity, but no more than 180 days after starting operation of the core making machines, in order to demonstrate the removal efficiency of the acid scrubber for triethylamine (TEA) the Permittee shall perform testing utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be

conducted in accordance with Section C- Performance Testing.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.6.6 Bin Vent Monitoring

(a) Visible emissions notations of the bin vent exhaust shall be performed during sand silo loading. A trained employee will record whether emissions are normal or abnormal. For processes operated continuously "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

(b) The Permittee shall quarterly inspect the bin vent for proper operation and to ensure the filters are in good condition. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

(c) Additional inspections and preventive measures shall be performed as prescribed in the Preventive Maintenance Plan.

D.6.7 Acid Scrubber Monitoring

(a) The Permittee shall record the scrubbing liquor flow rate through the acid scrubber controlling the core making machines, at least once per shift when the scrubber is in operation. Unless operated under conditions for which the Preventive Maintenance Plan specifies otherwise, the flow rate through the scrubber shall be maintained at a minimum of 10 gallons per minute or a range established during the latest stack test. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

(b) The Permittee shall record the scrubbing liquid pH in the acid scrubber controlling the core making machines, at least once per shift when the scrubber is in operation. Unless operated under conditions for which the Preventive Maintenance Plan specifies otherwise, the scrubbing liquid pH shall be below 4.5 or a range established during the latest stack test. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

(c) The Permittee shall record the total static pressure drop across the acid scrubber controlling the core making machines, at least once per shift when the scrubber is in operation. Unless operated under conditions for which the Preventive Maintenance Plan specifies otherwise, the pressure drop across the acid scrubber shall be maintained within the range of 1.0 to 6.0 inches of water or a range established during the latest stack test. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

(d) Additional inspections and preventive measures shall be performed as prescribed in the Preventive Maintenance Plan.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.6.8 Record Keeping Requirements

(a) To document compliance with Condition D.6.6 and D.6.7, the Permittee shall maintain a log of sand silo loading times, visible emission notations for sand silo loading, quarterly inspections of the bin vent, pressure drop across the acid scrubber, scrubbing liquid flow rate, and scrubbing liquid pH, and those additional inspections prescribed by the Preventive Maintenance Plan.

(b) To document compliance with Condition D.6.3, the Permittee shall maintain records of the weight of core produced each day. The records shall be complete and sufficient to establish compliance with the metal use limitation in Condition D.6.3.

(c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.6.9 Reporting Requirements

A summary of the information to document compliance with Conditions D.6.3 shall be submitted to the addresses listed in Section C - General Reporting Requirements, of this permit, upon request.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION
and
VIGO COUNTY AIR POLLUTION CONTROL

Part 70 Quarterly Report

Source Name: Gartland Foundry Company
Source Address: 330 Grant Street, Terre Haute, Indiana 47802
Mailing Address: 330 Grant Street, Terre Haute, Indiana 47802
Part 70 Permit No.: T167-16913-00007
Facility: Induction Furnaces (EU130 and EU140)
Parameter: combined metal input
Limit: 20,921 tons (combined) per 12 consecutive month period with compliance determined at the end of each month

YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Last 11 Months	12 Month Total

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

Attach a signed certification to complete this report.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION
and
VIGO COUNTY AIR POLLUTION CONTROL

Part 70 Quarterly Report

Source Name: Gartland Foundry Company
Source Address: 330 Grant Street, Terre Haute, Indiana 47802
Mailing Address: 330 Grant Street, Terre Haute, Indiana 47802
Part 70 Permit No.: T167-16913-00007
Facility: Sand handling system
Parameter: sand input
Limit: 562,887 tons (combined) per 12 consecutive month period with compliance determined at the end of each month

YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Last 11 Months	12 Month Total

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

Attach a signed certification to complete this report.

Indiana Department of Environmental Management
Office of Air Quality
and
Vigo County Air Pollution Control

Technical Support Document (TSD) for a Part 70 Significant Permit Modification.

Source Background and Description

Source Name:	**Gartland Foundry Company**
Source Location:	**330 Grant Street, Terre Haute, Indiana 47802**
County:	**Vigo County**
SIC Code:	**3321**
Operation Permit No.:	**T 167-5998-00007**
Operation Permit Issuance Date:	**September 27, 2000**
Significant Permit Modification No.:	**167-17187-00007**
Permit Reviewer:	**Rob Harmon**

Vigo County Air Pollution Control (VCAPC) has reviewed a modification application from Gartland Foundry Company relating to the construction of the following emission units and pollution control devices:

(a) Isocure Core Machine, identified as EU 220, fed by mixer 1, with a maximum capacity of 0.625 tons per hour, controlled by an acid scrubber, and exhausting to stack SC-8. (Existing)

(b) Isocure Core Machine, identified as EU 221, fed by mixer 1, with a maximum capacity of 0.625 tons per hour, controlled by an acid scrubber, and exhausting to stack SC-8. (Existing)

(c) Isocure Core Machine, identified as EU 222, fed by mixer 2, with a maximum capacity of 0.525 tons per hour, controlled by an acid scrubber, and exhausting to stack SC-8. (Existing)

(d) Cold Box (Isocure) Core Machine, identified as CBCM-1, fed by mixer 2, with a maximum capacity of 1 ton per hour, controlled by an acid scrubber, and exhausting to stack SC-8.

(e) Cold Box (Isocure) Core Machine, identified as CBCM-2, fed by mixer 2, with a maximum capacity of 1 ton per hour, controlled by an acid scrubber, and exhausting to stack SC-8.

(f) Sand Mixer, identified as mixer 2.

(g) Sand heater

(h) Sand day tank

(i) Bin Vent for control of existing sand silo

History

On October 23, 2002, Gartland Foundry Company submitted an application to VCAPC requesting to replace two (2) additional Cold Box Core Machines to their existing plant. They changed this request on December 23, 2002 to the addition of those Core Machines. The first public notice started on February 18, 2003. However, there were substantial changes to the approval and it needs another Public Notice period in order to conform with the public participation requirements of the Part 70 Program. The construction portion of this review is covered under Significant Source Modification 167-16913-00007. Gartland Foundry was issued a Part 70 permit on September 27, 2000.

Enforcement Issue

There are no enforcement actions pending.

Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (^{0}F)
SC-8	Acid Scrubber	30	1'	5000	ambient
Bin Vent	Bin Vent	30	0.5'	50	ambient

Recommendation

The staff recommends to the Commissioner that the Part 70 Significant Permit Modification be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on October 23, 2002, however, additional material was submitted on December 23, 2002 that changed the scope of the project. Additional information was submitted on May 2, 2003, May 9, 2003, and May 12, 2003.

Emission Calculations

See Appendix A of this document for detailed emissions calculations (3 pages).

Justification for Modification

The Part 70 Operating permit is being modified through a Part 70 Significant Source Modification (to approve construction) and a Part 70 Significant Permit Modification (to incorporate the Source Modification into the Part 70 Permit and allow operation). This modification is being performed pursuant to 326 IAC 2-7-10.5(g) due to the type of modification being specifically listed under 326 IAC 2-7-10.5(f)(4) [potential to emit of PM and VOC greater than 25 tons per year] and 326 IAC 2-7-10.5(f)(6) [potential to emit HAP greater than 10 tons per year of a single HAP]. This approval also limits the entire source to less than major levels with regard to the PSD requirements.

Potential to Emit After Issuance

Emission Unit	Limit (tpy)	PM	PM10	SOx	NOx	VOC	CO	Pb
Scrap and Charge Handling	20,921	6.28	3.77					0.02
Electric Induction Melting	20,921	0.19	0.18					0.00
Magnesium Treatment	985	0.89	0.89					0.02
Pouring	20,921	43.94	21.55	0.21	0.10	1.46		0.17
Cooling	20,921	14.65	14.65					
Casting Shakeout	20,921	0.67	0.47			12.55		
Sand Handling System	562,887	20.26	3.04					
Coldbox Sand Handling	1,100	0.04	0.01					
Coldbox Core Machine	1,100					0.52		

Coldbox Mixers	1,100					0.22		
Shell Core Making and Sand	26,280*	0.95	0.14			3.34		
Oil Core Making and Sand Handling	2,190*					3.34		
Release Agents	2,122					6.86		
Spinblast, Wheelabrator	20,921	3.56	0.36					0.00
Grinders, Tumbler	20,921	0.00	0.00					0.00
Finish Grinders	20,921	0.02	0.01					0.01
Electrostatic Surface Coating Booth	14,000 gallons	4.32	4.32			24.50		
Source Wide Total		95.75	49.37	0.21	0.10	52.79	0.00	0.36

The application of these production limits, in conjunction with the continuous use of the associated control equipment, results in Gartland Foundry now being classified as a minor source with regard to the Prevention of Significant Deterioration (PSD) requirements. Limitations marked with an * are at the unit's capacity. Those limits do not need to be added to the permit because any change affecting that capacity would need a separate review.

Federal Rule Applicability

(a) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this proposed modification.

(b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14 and 40 CFR Part 63) applicable to this proposed modification.

40 CFR 64 Compliance Assurance Monitoring

(a) This significant permit modification does not involve a pollutant-specific emissions unit as defined in 40 CFR 64.1 for any pollutant:

(1) with the potential to emit before controls equal to or greater than the major source threshold for any pollutant;

(2) that is subject to an emission limitation or standard for any pollutant; and

(3) uses a control device as defined in 40 CFR 64.1 to comply with that emission limitation or standard.

Therefore, the requirements of 40 CFR 64, Compliance Assurance Monitoring, are not applicable to this modification.

State Rule Applicability - Individual Facilities

326 IAC 6-1 (Particulate Emissions)

Pursuant to 326 IAC 6-1-2(a) particulate matter emissions shall not exceed 0.03 grain per dry standard cubic foot.

326 IAC 8-1-6 (New Facility: General VOC Reduction requirements)

This modification is not subject to the requirements of 326 IAC 8-1-6 because the limited VOC emissions are below the 25 ton per year threshold.

Changes Made to the Existing Part 70 Permit

(a) The new D Section (D.6) that was developed for SSM 167-16913-00007 is added directly in after Section D.5.

(b) The references to the Isocure Core making in the description of Section D.4 are not longer needed since all that equipment is now covered under Section D.6. The change is shown below:

(4) Core making systems including:

(a) Three (3) Shell Core Machines, identified as EU320, EU321, and EU322 each with a maximum capacity of 1 ton per hour of sand, utilizing no controls and exhausting inside the source;

~~(b) Three (3) Isocure Core Machines and one sand mixer, the core machines are identified as EU220, EU221, and EU222 while the mixer is identified as EU210. Each core machine has a maximum capacity of 2 tons per hour of sand, utilizing no control and exhausting inside the source;~~

~~(c)~~**(b)** One (1) Oil Core Making Process, identified as EU410, utilizing a mixer and associated core boxes with a maximum capacity of 0.25 tons per hour of sand, utilizing no controls and exhausting inside the source; and

~~(d)~~**(c)** Core Wash Process, identified as EU730, with a maximum capacity of 1 ton per hour of sand, utilizing no controls and exhausting inside the source.

(c) In addition to the above changes (from the first PN), the following changes are being made at this time:

Section D.1 shall be removed entirely. Gartland Foundry has agreed to no longer operate that equipment.

The other D Sections are not being renumbered at this time.

Section D.2 shall be modified as follows:

SECTION D.2 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]:

Two (2) Electric Induction Furnaces as follows:

1. EU130, consisting of induction furnace #3, with a maximum capacity of 5.0 tons of metal per hour, using baghouse BH1 for control, and exhausting to stack SC-2.

2. EU140, consisting of induction furnace #4, with a maximum capacity of 5.0 tons of metal per hour, using baghouse BH1 for control, and exhausting to stack SC-2.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.2.1 Particulate Matter (PM) [326 IAC 6-3]

Pursuant to OP 07-3321-03-95, issued on August 21, 1995, the particulate matter (PM) emissions from Electric Induction Furnaces #3 and #4 shall be limited to 0.02 grains per dry standard cubic foot at an air flow rate of 20,000 cubic feet per minute. PM is also limited to 2.98 pounds per hour, and 13.04 tons per year.

These limits also satisfy the requirements of 326 IAC 2-2, for minor modifications to a major PSD source.

D.2.2 Housekeeping

Pursuant to OP-07-3321-03-95, the charge materials for electric induction furnaces #3 and #4 shall be stored inside a building. Also, visible emissions from any building opening shall not exceed 20% opacity, as determined by 40 CFR 60 Appendix A, Method 9 and 326 IAC 5-1.

D.2.3 PSD Minor Limit [326 IAC 2-2]

The input of metal to the induction furnaces (EU130 and EU140 combined) shall be less than 20,921 tons per 12 consecutive month period with compliance determined at the end of each month. This usage limit (combined with others throughout this approval) is required to limit the potential to emit of particulate matter for Gartland Foundry to less than 100 tons per 12 consecutive month period. Compliance with this limit makes 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable.

D.2.~~3~~**4** Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these facilities and their control device**s**.

Compliance Determination Requirements

D.2.~~4~~**5** Testing Requirements [326 IAC 2-7-6(1),(6)][326 IAC 2-1.1-11]

During the period between 24 and 30 months after issuance of this permit, the Permittee shall perform PM testing on each Electric Induction Furnace utilizing Methods 5 or 17 (40 CFR 60, Appendix A) for PM or other methods as approved by the Commissioner. This test shall be repeated at least once every five years from the date of this valid compliance demonstration. In addition to these requirements, IDEM and VCAPC may require compliance testing when necessary to determine if the facility is in compliance.

D.2.~~5~~**6** Particulate Matter (PM)

Pursuant to OP-07-3321-03-95, issued on August 21, 1995, the baghouse for PM control shall be in operation and control emissions from the Electric Induction Furnaces #3 and #4 are in operation.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.2.6**7** Visible Emissions Notations

(a) Daily visible emission notations of the Electric Induction Furnace stack (SC-2) exhaust shall be performed during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

(e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.

D.2.7**8** Parametric Monitoring

The Permittee shall record the total static pressure drop across the baghouse (BH1) used in conjunction with the Electric Induction Furnaces #3 and #4, at least once per shift when either Electric Induction Furnace is in operation and venting to the atmosphere. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the pressure drop across the baghouse shall be maintained within the range of 1.0 to 6.0 inches of water or a range established during the latest stack test. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any one reading.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge Specifications, of this permit, shall be subject to approval by IDEM, ~~OAM~~**OAQ** and VCAPC, and shall be calibrated at least once every six (6) months.

D.2.8**9** Baghouse Inspections

An inspection shall be performed each calender quarter of all bags controlling the Electric Induction Furnace operation when venting to the atmosphere. A baghouse inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting to the indoors. All defective bags shall be replaced.

D.2.9**10** Broken or Failed Bag Detection

In the event that bag failure has been observed:

(a) The affected compartments will be shut down immediately until the failed units have been repaired or replaced. Within eight (8) hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) hours of discovery of the failure and shall include a timetable for completion. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

(b) For single compartment baghouses, failed units and the associated processes will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.2.~~10~~**11** Record Keeping Requirements

(a) To document compliance with Condition ~~D.2.5~~ **D.2.7**, the Permittee shall maintain records of daily visible emission notations of the Electric Induction Furnace stack exhaust.

(b) To document compliance with Condition D.2.1 and ~~D.2.6~~ **D.2.8**, the Permittee shall maintain the following:

(1) Daily records of the following operational parameters during normal operation when venting to the atmosphere:
  (A) Inlet and outlet differential static pressure; and
  (B) Cleaning cycle: frequency and differential pressure.
(2) Documentation of all response steps implemented, per event .
(3) Operation and preventive maintenance logs, including work purchases orders, shall be maintained.
(4) Quality Assurance/Quality Control (QA/QC) procedures.
(5) Operator standard operating procedures (SOP).
(6) Manufacturer's specifications or its equivalent.
(7) Equipment "troubleshooting" contingency plan.
(8) Documentation of the dates vents are redirected.

(b) To document compliance with Condition ~~D.2.7~~ **D.2.9**, the Permittee shall maintain records of the results of the inspections required under Condition ~~D.2.7~~ **D.2.9** and the dates the vents are redirected.

(c) To document compliance with Condition D.2.3, the Permittee shall maintain records of the weight of metal melted each day. The records shall be complete and sufficient to establish compliance with the melting use limitation in Condition D.2.3.

~~(c)~~**(d)** All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.2.~~11~~**12** Reporting Requirements

(a) A summary of the information to document compliance with Conditions D.2.1, ~~D.2.5~~ D.2.6, D.2.7, ~~and~~ D.2.8 **and D.2.9** shall be submitted to the addresses listed in Section C - General Reporting Requirements, of this permit, upon request.

(b) A quarterly summary of the information to document compliance with Condition D.2.3 shall be submitted to the addresses listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Section D.3 shall be modified as follows:

SECTION D.3 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]:

One (1) electrostatic spray booth, identified as prime paint line EU710, with a maximum capacity of 500 grey iron castings per hour, with dry filters for control of particulate matter overspray, and exhausting to stack SC-6.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.3.1 Volatile Organic Compounds (VOC) [326 IAC 8-2-9] [326 IAC 2]

(a) The volatile organic compound (VOC) content of coating delivered to the applicator at Spray Booth EU710 shall be limited to 3.5 pounds of VOCs per gallon of coating less water, for extreme performance coatings.

(b) Any change or modification which may increase potential emissions to 25 tons per twelve (12) consecutive month period, from the equipment covered in Section D.5 of this permit, shall require prior approval from ~~OAM~~ **OAQ** and VCAPC before such change may occur.

D.3.2 Emission Minimization [326 IAC 8-2-9]

Solvent sprayed from application equipment during cleanup or color changes shall be directed into containers. Such containers shall be closed as soon as such solvent spraying is complete, and the waste solvent shall be disposed of in such a manner that evaporation is minimized.

D.3.3 Particulate Matter (PM) ~~[326 IAC 6-3-2(c)]~~**[326 IAC 6-1-2]**

~~The PM emissions from spray booth EU710 shall not exceed the pound per hour emission rate established as E in the following formula:~~

~~Interpolation and extrapolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:~~

~~$E = 4.10 P^{0.67}$ where E = rate of emission in pounds per hour; and P = process weight rate in tons per hour~~

Pursuant to 326 IAC 6-1-2, the electrostatic spray booth (EU710) shall not emit particulate matter (PM) in excess of 0.03 grains per dry standard cubic foot.

D.3.4 PSD Minor Limit [326 IAC 2-2]

The input of paint to the electrostatic spray booth (EU710) shall be less than 14,000 gallons per 12 consecutive month period with compliance determined at the end of each month. This usage limit (combined with others throughout this approval) is required to limit the potential to emit of particulate matter for Gartland Foundry to less than 100 tons per 12 consecutive month period. Compliance with this limit makes 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable.

D.3.~~4~~**5** Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for this facility and its control device.

Compliance Determination Requirements

~~D.3.5 Testing Requirements [326 IAC 2-7-6(1),(6)][326 IAC 2-1.1-11]~~

~~The Permittee is not required to test this facility by this permit. However, IDEM and VCAPC may require compliance testing when necessary to determine if the facility is in compliance. If testing is required by IDEM and VCAPC, compliance with the VOC or PM limits specified in Condition D.3.1 and D.3.3 shall be determined by a performance test conducted in accordance with Section C - Performance Testing.~~

D.3.6 Volatile Organic Compounds (VOC)

Compliance with the VOC content and usage limitations contained in Condition ~~D.4.1~~ **D.3.1 and D.3.4** shall be determined pursuant to 326 IAC 8-1-4(a)(3)(A) using formulation data supplied by the coating manufacturer. However, IDEM, ~~OAM~~ **OAQ**, and VCAPC reserve the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

D.3.7 Particulate Matter (PM)

The dry filters for PM overspray control from Spray Booth EU710 shall be in operation at all times when the spray booth is in operation and exhausting to the outside atmosphere.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.3.8 Monitoring

(a) Daily inspections shall be performed to verify the placement, integrity and particle loading of the filters. To monitor the performance of the dry filters, daily observations shall be made of the overspray while the spray booth is in operation. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a violation of this permit.

(b) Weekly inspections shall be performed of the coating emissions from the stack and the presence of overspray on the rooftops and the nearby ground. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an overspray emission, or other noticeable change in overspray emission is observed. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a violation of this permit.

(c) Additional inspections and preventive measures shall be performed as prescribed in the Preventive Maintenance Plan.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.3.9 Record Keeping Requirements

(a) To document compliance with Condition D.3.1 **and D.3.4**, the Permittee shall maintain records in accordance with (1) through (6) below. Records maintained for (1) through (6) shall be taken daily and shall be complete and sufficient to establish compliance with the VOC usage limits and/or the VOC emission limits established in Condition D.3.1.
   (1) The amount and VOC content of each coating material and solvent used. Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used. Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents;
   (2) A log of the dates of use;
   (3) The volume weighted VOC content of the coatings used for each day;
   (4) The cleanup solvent usage for each day;
   (5) The total VOC usage for each day; and
   (6) The weight of VOCs emitted for each compliance period.

(b) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.3.10 Reporting Requirements

A summary of the information to document compliance with Conditions D.3.1**, D.3.4**,and D.3.8 shall be submitted to the addresses listed in Section C - General Reporting Requirements, of this permit, upon request.

Section D.4 shall be modified as follows:

SECTION D.4 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]:

1. Sand handling systems including:
   (a) Sand Muller, identified as EU591, with a maximum capacity of 100 tons per hour, and sand conveyor, identified as EU592, using baghouse BH5 for control, and exhausting to stack SC-7.
   (b) Casting shakeout, identified as EU570, with a maximum capacity of 8 tons per hour, using a baghouse (BH3) for control, and exhausting to stack SC-4.
   (c) Mold making process including a mold making muller (EU510), six (6) squeezer mold machines (EU520), four (4) rotolift mold machines (EU521), auto mold machine (EU530), and another auto mold machine (EU531), utilizing no control, and exhausting to SU-INT6/7/8/13.
   (d) One (1) Waste sand handling system, identified as EU760, with a maximum capacity of 2.2 tons per hour of sand, exhausting to stack SU-INT12.
   (e) One (1) Shaker/Sorter unit, identified as EU580, with a maximum capacity of 8.0 tons per hour of metal castings, using baghouse BH5 for control, and exhausting to stack SC-7.

~~2. One (1) Scrap/Charge Handling operation for the cupola furnace, identified as EU100, with a maximum capacity of 19 tons of metal per hour, and exhausting as fugitive emissions FG-1.~~

~~3.~~**2.** One (1) Scrap/Charge Handling operation for the electric induction furnaces, identified as EU120, with a maximum capacity of 19 tons of metal per hour, and exhausting as fugitive emissions FG-1.

~~4.~~**3.** Casting Finishing:
   (a) One (1) Spin Blast, identified as EU610, with a maximum capacity of 5 tons per hour of metal castings, using baghouse BH2 for control and exhausting to stack SC-2.
   (b) One (1) Tumble Blast, identified as EU620, with a maximum capacity of 5 tons per hour of metal castings, using baghouse BH5 for control and exhausting to stack SC-7.
   (c) One (1) Tumbler, identified as EU630, with a maximum capacity of 1 ton per hour of metal castings using baghouse BH5 for control and exhausting to stack SC-7.
   (d) Four (4) Snag Grinders, identified as EU640, each with a maximum capacity of 2 tons per hour of metal castings, using baghouse BH5 for control and exhausting to stack SC-7.
   (e) Six (6) Finish Grinders, identified as EU650, each with a maximum capacity of 2 tons per hour of metal castings, using baghouse BH5 for control and exhausting to stack SC-7.

~~5.~~**4.** Core making systems including:
   (a) Three (3) Shell Core Machines, identified as EU320, EU321, and EU322 each with a maximum capacity of 1 ton per hour of sand, utilizing no controls and exhausting inside the source;
   (b) One (1) Oil Core Making Process, identified as EU410, utilizing a mixer and associated core boxes with a maximum capacity of 0.25 tons per hour of sand, utilizing no controls and exhausting inside the source; and
   (c) Core Wash Process, identified as EU730, with a maximum capacity of 1 ton per hour of sand, utilizing no controls and exhausting inside the source.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.4.1 Particulate Matter Limitation (PM) ~~[326 IAC 6-3-2]~~**[326 IAC 2-2]**

~~a.~~ Pursuant to CP 167-V022-00007, issued on July 16, 1997, the particulate matter (PM) emissions from baghouse BH-5, controlling emissions from the sand muller, and sand conveyor, shall be limited to 0.0075 grains per dry standard cubic foot at an air flow rate of 50,000 cubic feet per minute. PM emissions are also limited to 3.21 pounds per hour, and 14.08 tons per year.

~~b. The particulate matter (PM) from the casting shakeout system shall be limited by the following:~~

~~Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:~~

~~$E = 4.10 P^{0.67}$ where E = rate of emission in pounds per hour and P = process weight rate in tons per hour~~

These limits also satisfy the requirements of 326 IAC 2-2, for minor modifications to a major PSD source.

D.4.2 Particulate Matter Limitation (PM) ~~[326 IAC 6-3-2]~~**[326 IAC 6-1-2]**

The facilities not listed specifically in Condition D.4.1 shall not emit particulate matter (PM) in excess of 0.03 grains per dry standard cubic foot.

D.4.3 ~~Throughput Limitation~~ **PSD Minor Limit [326 IAC 2-2]**

(a) The throughput of the casting shakeout system shall not exceed ~~40,000~~ **20,921** tons per 12 consecutive month period~~, rolled monthly~~ **with compliance determined at the end of each month**. **This usage limit (combined with others throughout this approval) is required to limit the potential to emit of particulate matter for Gartland Foundry to less than 100 tons per 12 consecutive month period.** ~~This limitations~~ **Compliance with this limit** makes the requirements of 326 IAC 8-1-6 **and 326 IAC 2-2** not applicable.

(b) The input of sand to the sand handling system shall be less than 562,887 tons per 12 consecutive month period with compliance determined at the end of each month. This usage limit (combined with others throughout this approval) is required to limit the potential to emit of particulate matter for Gartland Foundry to less than 100 tons per 12 consecutive month period. Compliance with this limit makes 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable.

(c) The input of metal to be cleaned in the sandblast systems (EU610 and EU620 combined) shall be less than 20,921 tons per 12 consecutive month period with compliance determined at the end of each month. This usage limit (combined with others throughout this approval) is required to limit the potential to emit of particulate matter for Gartland Foundry to less than 100 tons per 12 consecutive month period. Compliance with this limit makes 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable.

(d) The input of metal processed in the tumbler grinders (EU630 and EU640 combined) shall be less than 20,921 tons per 12 consecutive month period with compliance determined at the end of each month. This usage limit (combined with others throughout this approval) is required to limit the potential to emit of particulate matter for Gartland Foundry to less than 100 tons per 12 consecutive month period. Compliance with this limit makes 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable.

(e) The input of metal processed in the finish grinders (EU650 combined) shall be less than 20,921 tons per 12 consecutive month period with compliance determined at the end of each month. This usage limit (combined with others throughout this approval) is required to limit the potential to emit of particulate matter for Gartland Foundry to less than 100 tons per 12 consecutive month period. Compliance with this limit makes 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable.

D.4.4 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these facilities and their control devices.

Compliance Determination Requirements

~~D.4.5 Testing Requirements [326 IAC 2-7-6(1),(6)]~~

~~The Permittee is not required to test these facilities by this permit. However, IDEM and VCAPC may require compliance testing at any specific time when necessary to determine if the facility is in compliance. If testing is required by IDEM and VCAPC, compliance with the particulate matter limit specified in Condition D.4.1 and D.4.2 shall be determined by a performance test conducted in accordance with Section C - Performance Testing.~~

D.4.6**5** Particulate Matter (PM)

(a) The baghouse (BH5) for PM control from the sand muller and sand conveyor shall be in operation at all times when the sand muller and sand conveyor are in operation.

(b) The baghouse (BH3) for PM control from the casting shakeout shall be in operation at all times when the casting shakeout system is in operation.

(c) The baghouse (BH2) for PM control from the spin blast shall be in operation at all times when the spin blast is in operation.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.4.7**6** Visible Emissions Notations

(a) Daily visible emission notations of the three baghouse (BH2, BH3, and BH5) exhausts shall be performed during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

(e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.

D.4.8**7** Parametric Monitoring

The Permittee shall record the total static pressure drop across the baghouse used in conjunction with sand muller and sand conveyor, at least once per shift when the sand muller and sand conveyor are in operation and when venting to the atmosphere. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the pressure drop across the baghouse shall be maintained within the range of 4.0 and 6.0 inches of water or a range established during the latest stack test. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any one reading.

The Permittee shall record the total static pressure drop across the baghouse used in conjunction with casting shakeout, at least once per shift when the casting shakeout system is in operation and when venting to the atmosphere. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the pressure drop across the baghouse shall be maintained within the range of 1.0 and 6.0 inches of water or a range established during the latest stack test. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any one reading.

The Permittee shall record the total static pressure drop across the baghouse used in conjunction with the spin blast, at least once per shift when the spin blast is in operation and when venting to the

atmosphere. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the pressure drop across the baghouse shall be maintained within the range of 1.0 and 6.0 inches of water or a range established during the latest stack test. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any one reading.

The instruments used for determining the pressure shall comply with Section C - Pressure Gauge Specifications, of this permit, shall be subject to approval by IDEM, ~~OAM~~ **OAQ**, and Vigo County Air Pollution Control and shall be calibrated at least once every six (6) months.

D.4.~~9~~**8** Baghouse Inspections

An inspection shall be performed each calender quarter of all bags controlling the sand muller and sand conveyor when venting to the atmosphere. A baghouse inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting to the indoors. All defective bags shall be replaced.

An inspection shall be performed each calender quarter of all bags controlling the casting shakeout when venting to the atmosphere. A baghouse inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting to the indoors. All defective bags shall be replaced.

An inspection shall be performed each calender quarter of all bags controlling the spin blast when venting to the atmosphere. A baghouse inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting to the indoors. All defective bags shall be replaced.

D.4.~~10~~**9** Broken Bag or Failure Detection

In the event that bag failure has been observed:

(a) The affected compartments will be shut down immediately until the failed units have been repaired or replaced. For single compartment baghouses, failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced.

(b) Within eight (8) hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) hours of discovery of the failure and shall include a timetable for completion.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.4.~~11~~**10** Record Keeping Requirements

(a) To document compliance with Condition D.4.6, the Permittee shall maintain records of daily visible emission notations of the baghouses BH2, BH3 and BH5 stack exhausts.

(b) To document compliance with Condition D.4.1 and D.4.7, the Permittee shall maintain the following:
  (1) Daily records of the following operational parameters during normal operation when venting to the atmosphere:
    (A) Inlet and outlet differential static pressure; and
    (B) Cleaning cycle: frequency and differential pressure.
  (2) Documentation of all response steps implemented, per event .
  (3) Operation and preventive maintenance logs, including work purchases orders, shall be maintained.
  (4) Quality Assurance/Quality Control (QA/QC) procedures.
  (5) Operator standard operating procedures (SOP).
  (6) Manufacturer's specifications or its equivalent.

(7) Equipment "troubleshooting" contingency plan.
(8) Documentation of the dates vents are redirected.

(c) To document compliance with Condition D.4.3, the Permittee shall maintain records of the weight of metal handled in each process each day. The records shall be complete and sufficient to establish compliance with the melting use limitation in Condition D.4.3.

~~(c)~~**(d)** All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.4.~~12~~**11** Reporting Requirements

(a) A summary of the information to document compliance with Conditions D.4.1, D.4.2**, D.4.3** and ~~D.4.8~~ **D.4.7** shall be submitted to the addresses listed in Section C - General Reporting Requirements, of this permit, upon request.

(b) A quarterly summary of the information to document compliance with Condition D.4.3(b) shall be submitted to the addresses listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Section D.5 shall be modified as follows:

SECTION D.5 FACILITY CONDITIONS

Facility Description [326 IAC 2-7-5(15)]:

1. Inoculation for Ductile Iron Production **(Magnesium Treatment)**, with a maximum capacity of 10 tons of metal per hour, identified as EU150, utilizing a closed ladle for control, and exhausting to inside the source.

2. Pouring, identified as EU540, with a maximum capacity of 18 tons of metal per hour each, and exhausting as fugitive emissions FG-INT1 (vented to interior). Pouring operations are conducted on the floor, sinto molding line, and beardsley molding line. The maximum pouring capacity of the floor, sinto molding line, and beardsley molding line is 11.2, 5.0, and 3.0 tons per hour of metal, respectively.

3. Cooling, identified as EU550, with a maximum capacity of 18 tons of metal per hour each, and exhausting as fugitive emissions FG-INT1 (vented to interior). Cooling operations are conducted on the floor, sinto molding line, and beardsley molding line. The maximum cooling capacity of the floor, sinto molding line, and beardsley molding line is 11.2, 5.0, and 3.0 tons per hour of metal, respectively.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.5.1 Particulate Matter Limitation (PM) ~~[326 IAC 6-3-2]~~**[326 IAC 6-1-2]**

~~The particulate matter (PM) from the various facilities (other than those specifically limited by Condition D.4.1 above) shall be limited by the following equations (depending on process weight rate):~~

~~Interpolation and extrapolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:~~

~~$E = 4.10 P^{0.67}$ where E = rate of emission in pounds per hour and P = process weight rate in tons per hour~~

~~Interpolation and extrapolation of the data for the process weight rate in excess of sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:~~

~~$E = 55.0 P^{0.11} - 40$ where E = rate of emission in pounds per hour and P = process weight rate in tons per hour~~

Pursuant to 326 IAC 6-1-2, the facilities listed above (Inoculation, Pouring, and Cooling) shall not emit particulate matter (PM) in excess of 0.03 grains per dry standard cubic foot.

D.5.2 PSD Minor Limit [326 IAC 2-2]

The input of metal to the inoculation system (EU150) shall be less than 985 tons per 12 consecutive month period with compliance determined at the end of each month. This usage limit (combined with others throughout this approval) is required to limit the potential to emit of particulate matter for Gartland Foundry to less than 100 tons per 12 consecutive month period. Compliance with this limit makes 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable.

D.5.3 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these facilities and their control devices.

~~**Compliance Determination Requirements**~~

~~D.5.2 Testing Requirements [326 IAC 2-7-6(1),(6)][326 IAC 2-1.1-11]~~

~~The Permittee is not required to test these facilities by this permit. However, IDEM and VCAPC may require compliance testing when necessary to determine if the facility is in compliance. If testing is required by IDEM and VCAPC, compliance with the particulate matter limit specified in Condition D.5.1 shall be determined by a performance test conducted in accordance with Section C - Performance Testing.~~

Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.5.4 Record Keeping Requirements

(a) To document compliance with Condition D.5.2, the Permittee shall maintain records of the weight of metal inoculated each day. The records shall be complete and sufficient to establish compliance with the metal use limitation in Condition D.5.2.

(b) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.5.5 Reporting Requirements

A summary of the information to document compliance with Conditions D.5.2 shall be submitted to the addresses listed in Section C - General Reporting Requirements, of this permit, upon request.

Section D.6 shall be modified as follows:

SECTION D.6 FACILITY CONDITIONS

Facility Description [326 IAC 2-7-5(15)]:

1. Isocure Core Machine, identified as EU 220, fed by mixer 1, with a maximum capacity of 0.625 tons per hour, controlled by an acid scrubber, and exhausting to stack SC-8.

2. Isocure Core Machine, identified as EU 221, fed by mixer 1, with a maximum capacity of 0.625 tons per hour, controlled by an acid scrubber, and exhausting to stack SC-8.

3. Isocure Core Machine, identified as EU 222, fed by mixer 2, with a maximum capacity of 0.525 tons per hour, controlled by an acid scrubber, and exhausting to stack SC-8.

4. Cold Box (Isocure) Core Machine, identified as CBCM-1, fed by mixer 2, with a maximum capacity of 1 ton per hour, controlled by an acid scrubber, and exhausting to stack SC-8.

5. Cold Box (Isocure) Core Machine, identified as CBCM-2, fed by mixer 2, with a maximum capacity of 1 ton per hour, controlled by an acid scrubber, and exhausting to stack SC-8.

6. Sand Mixer, identified as mixer 2.

7. Sand heater

~~8. Sand day tank~~

~~9.~~ **8.** Bin Vent for control of existing sand silo

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.6.1 Particulate Matter (PM) [326 IAC 6-1-2]

Pursuant to 326 IAC 6-1-2(a) particulate matter emissions shall not exceed 0.03 grain per dry standard cubic foot.

D.6.2 Triethylamine Control [326 IAC 2-2][40 CFR 52.21][326 IAC 2-4.1]

The acid scrubber shall be in operation at all times any of the associated Cold Box Core Machines (EU220, EU221, EU222, Cold Box Core Machine 1, and Cold Box Core Machine 2) are in operation.

D.6.3 PSD Minor Limit [326 IAC 2-2]

The production of cores in the isocure machines (EU220, EU221, EU222, CBCM-1 and CBCM-2 combined) shall be less than 1,100 tons per 12 consecutive month period with compliance determined at the end of each month. This usage limit (combined with others throughout this approval) is required to limit the potential to emit of particulate matter for Gartland Foundry to less than 100 tons per 12 consecutive month period. Compliance with this limit makes 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable.

D.6.~~3~~**4** Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for this facilities and any control devices.

Compliance Determination Requirements

D.6.~~4~~**5** Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

Within 60 days after reaching maximum capacity, but no more than 180 days after starting operation of the core making machines, in order to demonstrate the removal efficiency of the acid scrubber for triethylamine (TEA) the Permittee shall perform testing utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C- Performance Testing.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.6.~~5~~**6** Bin Vent Monitoring

(a) Visible emissions notations of the bin vent exhaust shall be performed during sand silo loading. A trained employee will record whether emissions are normal or abnormal. For processes operated continuously "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

(b) The Permittee shall quarterly inspect the bin vent for proper operation and to ensure the filters are in good condition. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

(c) Additional inspections and preventive measures shall be performed as prescribed in the Preventive Maintenance Plan.

D.6.~~6~~**7** Acid Scrubber Monitoring

(a) The Permittee shall record the scrubbing liquor flow rate through the acid scrubber controlling the core making machines, at least once per shift when the scrubber is in operation. Unless operated under conditions for which the Preventive Maintenance Plan specifies otherwise, the flow rate through the scrubber shall be maintained at a minimum of 10 gallons per minute or a range established during the latest stack test. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

(b) The Permittee shall record the scrubbing liquid pH in the acid scrubber controlling the core making machines, at least once per shift when the scrubber is in operation. Unless operated under conditions for which the Preventive Maintenance Plan specifies otherwise, the scrubbing liquid pH shall be below 4.5 or a range established during the latest stack test. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

(c) The Permittee shall record the total static pressure drop across the acid scrubber controlling the core making machines, at least once per shift when the scrubber is in operation. Unless operated under conditions for which the Preventive Maintenance Plan specifies otherwise, the pressure drop across the ~~bin vent~~ **acid scrubber** shall be maintained within the range of 1.0 to

6.0 inches of water or a range established during the latest stack test. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

(d) Additional inspections and preventive measures shall be performed as prescribed in the Preventive Maintenance Plan.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.6.~~7~~**8** Record Keeping Requirements

(a) To document compliance with Condition ~~D.6.4 and D.6.5~~ **D.6.6 and D.6.7**, the Permittee shall maintain a log of sand silo loading times, visible emission notations for sand silo loading, quarterly inspections of the bin vent, pressure drop across the acid scrubber, scrubbing liquid flow rate, and scrubbing liquid pH, and those additional inspections prescribed by the Preventive Maintenance Plan.

(b) To document compliance with Condition D.6.3, the Permittee shall maintain records of the weight of core produced each day. The records shall be complete and sufficient to establish compliance with the metal use limitation in Condition D.6.3.

~~(b)~~**(c)** All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.6.9 Reporting Requirements

A summary of the information to document compliance with Conditions D.6.3 shall be submitted to the addresses listed in Section C - General Reporting Requirements, of this permit, upon request.

The periodic (quarterly) material use report forms are replaced as follows:

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION
and
VIGO COUNTY AIR POLLUTION CONTROL

Part 70 Quarterly Report

Source Name: Gartland Foundry Company
Source Address: 330 Grant Street, Terre Haute, Indiana 47802
Mailing Address: 330 Grant Street, Terre Haute, Indiana 47802
Part 70 Permit No.: T167-16913-00007
Facility: Induction Furnaces (EU130 and EU140)
Parameter: combined metal input
Limit: 20,921 tons (combined) per 12 consecutive month period with compliance determined at the end of each month

YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Last 11 Months	12 Month Total

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

Attach a signed certification to complete this report.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION
and
VIGO COUNTY AIR POLLUTION CONTROL

Part 70 Quarterly Report

Source Name: Gartland Foundry Company
Source Address: 330 Grant Street, Terre Haute, Indiana 47802
Mailing Address: 330 Grant Street, Terre Haute, Indiana 47802
Part 70 Permit No.: T167-16913-00007
Facility: Sand handling system
Parameter: sand input
Limit: 562,887 tons (combined) per 12 consecutive month period with compliance determined at the end of each month

YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Last 11 Months	12 Month Total

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

Attach a signed certification to complete this report.

(d) The changes identified in (a) through (c) above were also transferred into the Table of Contents and Condition A.2 (Facility Descriptions). Condition A.2 now states:

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

This stationary source consists of the following emission units and pollution control devices:

~~(1) One (1) Cupola, identified as EU110, with a maximum capacity of 11.2 tons of metal per hour, using scrubber identified as SCR for control, and exhausting to stack SC~~-1.

(2) Two (2) Electric Induction Furnaces as follows:

(a) EU130, consisting of induction furnace #3, with a maximum capacity of 5.5 tons of metal per hour, using baghouse BH1 for control, and exhausting to stack SC-2.

(b) EU140, consisting of induction furnace #4, with a maximum capacity of 5.5 tons of metal per hour, using baghouse BH1 for control, and exhausting to stack SC-2.

(3) One (1) electrostatic spray booth, identified as prime paint line EU710, with a maximum capacity of 500 grey iron castings per hour, with dry filters for control of particulate matter overspray, and exhausting to stack SC-6.

(4) Sand handling systems including:

(a) Sand Muller, identified as EU591, with a maximum capacity of 100 tons per hour, and sand conveyor, identified as EU592, using baghouse BH5 for control, and exhausting to stack SC-7.

(b) Casting shakeout, identified as EU570, with a maximum capacity of 8 tons per hour, using baghouse BH3 for control, and exhausting to stack SC-4.

(c) Mold making process including a mold making muller (EU510), six (6) squeezer mold machines (EU520), four (4) rotolift mold machines (EU521), auto mold machine (EU530), and another auto mold machine (EU531), utilizing no control, and exhausting to SU-INT6/7/8/13.

(d) One (1) Waste sand handling system, identified as EU760, with a maximum capacity of 2.2 tons per hour of sand, exhausting to stack SU-INT12.

(e) One (1) Shaker/Sorter unit, identified as EU580, with a maximum capacity of 8.0 tons per hour of metal castings, using baghouse BH5 for control and exhausting to stack SC-7.

(5) One (1) Scrap/Charge Handling operation for the cupola furnace, identified as EU100, with a maximum capacity of 19 tons of metal per hour, and exhausting as fugitive emissions FG-1.

(6) One (1) Scrap/Charge Handling operation for the electric induction furnaces, identified as EU120, with a maximum capacity of 19 tons of metal per hour, and exhausting as fugitive emissions FG-1.

(7) Casting Finishing:

(a) One (1) Spin Blast, identified as EU610, with a maximum capacity of 5 tons per hour of metal castings, using baghouse BH2 for control and exhausting to stack SC-2.

(b) One (1) Tumble Blast, identified as EU620, with a maximum capacity of 5 tons per hour of metal castings, using baghouse BH5 for control and exhausting to stack SC-7.

(c) One (1) Tumbler, identified as EU630, with a maximum capacity of 1 ton per hour of metal castings using baghouse BH5 for control and exhausting to stack SC-7.

(d) Four (4) Snag Grinders, identified as EU640, each with a maximum capacity of 2 tons per hour of metal castings, using baghouse BH5 for control and exhausting to stack SC-7.

(e) Six (6) Finish Grinders, identified as EU650, each with a maximum capacity of 2 tons per hour of metal castings, using baghouse BH5 for control and exhausting to stack SC-7.

(8) Core making systems including:

(a) Three (3) Shell Core Machines, identified as EU320, EU321, and EU322 each with a maximum capacity of 1 ton per hour of sand, utilizing no controls and exhausting inside the source;

~~(b) Three (3) Isocure Core machines and one sand mixer, the core machines are identified as EU220, EU221, and EU222 while the mixer is identified as EU210. Each core machine has a maximum capacity of 2 tons per hour of sand, utilizing no controls and exhausting inside the source;~~

~~(c)~~**(b)** One (1) Oil Core Making Process, identified as EU410, utilizing a mixer and associated core boxes with a maximum capacity of 0.25 tons per hour of sand, utilizing no controls and exhausting inside the source; and

~~(d)~~**(c)** Core Wash process, identified as EU730, with a maximum capacity of 1 ton per hour of sand, utilizing no controls and exhausting inside the source.

(9) Inoculation for Ductile Iron Production, with a maximum capacity of 10 tons of metal per hour, identified as EU150, utilizing a closed ladle for control, and exhausting to inside the source.

(10) Pouring, identified as EU540, with a maximum capacity of 18 tons of metal per hour each, and exhausting as fugitive emissions FG-INT1 (vented to interior). Pouring operations are conducted on the floor, sinto molding line, and beardsley molding line. The maximum pouring capacity of the floor, sinto molding line, and beardsley molding line is 11.2, 5.0, and 3.0 tons per hour of metal, respectively.

(11) Cooling, identified as EU550, with a maximum capacity of 18 tons of metal per hour each, and exhausting as fugitive emissions FG-INT1 (vented to interior). Cooling operations are conducted on the floor, sinto molding line, and beardsley molding line. The maximum cooling capacity of the floor, sinto molding line, and beardsley molding line is 11.2, 5.0, and 3.0 tons per hour of metal, respectively.

(12) Cold Box (Isocure) Core Machine Operations including:

a. Isocure Core Machine, identified as EU 220, fed by mixer 1, with a maximum capacity of 0.625 tons per hour, controlled by an acid scrubber, and exhausting to stack SC-8.

b. Isocure Core Machine, identified as EU 221, fed by mixer 1, with a maximum capacity of 0.625 tons per hour, controlled by an acid scrubber, and exhausting to stack SC-8.

c. Isocure Core Machine, identified as EU 222, fed by mixer 2, with a maximum capacity of 0.525 tons per hour, controlled by an acid scrubber, and exhausting to stack SC-8.

d. Cold Box (Isocure) Core Machine, identified as CBCM-1, fed by mixer 2, with a maximum capacity of 1 ton per hour, controlled by an acid scrubber, and exhausting to stack SC-8.

e. Cold Box (Isocure) Core Machine, identified as CBCM-2, fed by mixer 2, with a maximum capacity of 1 ton per hour, controlled by an acid scrubber, and

exhausting to stack SC-8.

f. Sand Mixer, identified as mixer 2.

g. Sand heater

h. Bin Vent for control of existing sand silo

Compliance Requirements

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAQ and VCAPC, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

The compliance monitoring requirements applicable to this modification are as follows:

1. The bin vent has applicable compliance monitoring conditions as specified below:

   (a) Visible emissions notations of the bin vent exhaust shall be performed during sand silo loading. A trained employee will record whether emissions are normal or abnormal. For processes operated continuously "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. The Preventive Maintenance Plan for this unit shall contain troubleshooting contingency and corrective actions for when an abnormal emission is observed.

   (b) The Permittee shall quarterly inspect the bin vent for proper operation and to ensure the filters are in good condition. The Preventive Maintenance Plan for this unit shall contain troubleshooting contingency and corrective actions for when an abnormal condition is observed.

   These monitoring conditions are necessary because the bin vent for controlling the sand silo must operate properly to ensure compliance with 326 IAC 6-1-2 (Particulate emissions) and 326 IAC 2-7 (Part 70).

2. The acid scrubber has applicable compliance monitoring conditions as specified below:

   (a) The Permittee shall record the scrubbing liquor flow rate through the acid scrubber controlling the core making machines, at least once per shift when the scrubber is in

operation. Unless operated under conditions for which the Preventive Maintenance Plan specifies otherwise, the flow rate through the scrubber shall be maintained at a minimum of 10 gallons per minute or a range established during the latest stack test. The Preventive Maintenance Plan for this unit shall contain troubleshooting contingency and corrective actions for when the scrubber liquid flow rate is outside of the above mentioned range for any one reading.

(b) The Permittee shall record the scrubbing liquid pH in the acid scrubber controlling the core making machines, at least once per shift when the scrubber is in operation. Unless operated under conditions for which the Preventive Maintenance Plan specifies otherwise, the scrubbing liquid pH shall be below 4.5 or a range established during the latest stack test. The Preventive Maintenance Plan for this unit shall contain troubleshooting contingency and corrective actions for when the pressure reading is outside of the above mentioned range for any one reading.

(c) The Permittee shall record the total static pressure drop across the acid scrubber controlling the core making machines, at least once per shift when the scrubber is in operation. Unless operated under conditions for which the Preventive Maintenance Plan specifies otherwise, the pressure drop across the bin vent shall be maintained within the range of 1.0 to 6.0 inches of water or a range established during the latest stack test. The Preventive Maintenance Plan for this unit shall contain troubleshooting contingency and corrective actions for when the pressure reading is outside of the above mentioned range for any one reading.

(d) Gartland Foundry will conduct an initial performance test within 60 days of reaching maximum capacity, but no more than 180 days after startup. This stack test will be to determine TEA emission rates and collection efficiencies.

Conclusion

The operation of this proposed modification shall be subject to the conditions of the attached proposed Part 70 Significant Permit Modification No. 167-17187-00007.

Gartland Foundry
Core Machine Project
SSM 167-16913-00007 SPM 167-17187-00007

Gartland Foundry currently has 3 isocure (EU220, EU221, EU22) core machines (cold box core machine) handled by a single mixer. They currently exhaust this gas directly to the atmosphere. This project will add 2 new cold box core machines (CBCM1 and CBCM2) and an additional mixer. They will also be rearranging which mixer handles which core machine. The project also includes a new sand heater and a new sand day tank.

The new equipment will be combined with existing core machine EU222 and all be handled by the new mixer. The other 2 existing core machines (EU220 and EU 221) will be handled by the existing mixer. In both cases the process is limited by the core machine operating rates.

Core Machine Emissions:

1	ton per hour for Cold Box Core Machine 1 (new)
1	ton per hour for Cold Box Core Machine 2 (new)
0.525	ton per hour for Cold Box Core Machine EU222 (existing)
2.525	total ton per hour handled by the new mixer
0.625	ton per hour for Cold Box Core Machine EU220 (existing)
0.625	ton per hour for Cold Box Core Machine EU221 (existing)
1.25	total ton per hour handled by the old mixer
3.775	total cold box core making capacity after this project is completed. (ton per hour)
33069	potential ton throughput @ 8760 hour per year
6	pounds per ton of sand is the TEA (triethylamine) addition rate (HAP and VOC)
99.2	tons per year potential TEA emissions (before control)
52.56	tons per year potential TEA emissions from the new core machines (before control)
98%	Design TEA removal efficiency for the acid scrubber
1.05	tons per year potential TEA emissions from the new core machines (after control)
0.82	pounds of VOC (excluding TEA) per ton sand, based on a stack test at Dalton
13.56	ton (non TEA) VOC
7.18	ton (non TEA) VOC from the new core machines only

Mixer Emissions:

0.40	pounds of VOC per ton sand, based on a stack test at Dalton
2.525	total ton per hour handled by the new mixer
3.775	total cold box core making capacity after this project is completed. (ton per hour)
4.42	tons VOC potential (new mixer only)
6.61	tons VOC potential (total mixer capacity)

Core Sand Handling System Emissions:

3.6	pounds of PM per ton sand (AP-42 factor)
0.54	pounds of PM10 per ton sand (AP-42 factor)
2.525	total ton per hour handled by the new mixer
3.775	total cold box core making capacity after this project is completed. (ton per hour)
39.81	tons PM potential (new mixer only, before control)
59.52	tons PM potential (total mixer capacity, before control)
5.97	tons PM10 potential (new mixer only, before control)
8.93	tons PM10 potential (total mixer capacity, before control)

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Core Sand Handling System Emissions (continued):

98% design PM/PM10 removal efficiency of the bin vent
0.80 tons PM potential (new mixer only, after control)
1.19 tons PM potential (total mixer capacity, after control)
0.12 tons PM10 potential (new mixer only, after control)
0.18 tons PM10 potential (total mixer capacity, after control)

Emission Summary

Before Control (new equipment only)

	VOC non TEA	TEA	VOC total	PM	PM10
Core Macines	7.18	52.56	59.74		
Mixing	4.42		4.42		
Sand Handling				39.81	5.97
Total:	11.61	52.56	64.17	39.81	5.97

After Control (new equipment only)

	VOC non TEA	TEA	VOC total	PM	PM10
Core Macines	7.18	1.05	8.23		
Mixing	4.42		4.42		
Sand Handling				1.19	0.12
Total:	11.61	1.05	12.66	1.19	0.12

Gartland Foundry
Core Machine Project
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Source wide emissions (after newly imposed limits)

Emission Unit	Limit (tpy)	PM	PM10	SOx	NOx	VOC	CO	Pb
Scrap and Charge Handling	20,921	6.28	3.77					0.02
Electric Induction Melting	20,921	0.19	0.18					0.00
Magnesium Treatment	985	0.89	0.89					0.02
Pouring	20,921	43.94	21.55	0.21	0.10	1.46		0.17
Cooling	20,921	14.65	14.65					
Casting Shakeout	20,921	0.67	0.47			12.55		
Sand Handling System	562,887	20.26	3.04					
Coldbox Sand Handling	1,100	0.04	0.01					
Coldbox Core Making	1,100					0.52		
Coldbox Mixers	1,100					0.22		
Shell Core Making and Sand	26,280*	0.95	0.14			3.34		
Oil Core Making and Sand	2,190*					3.34		
Release Agents	2,122					6.86		
Sandblast	20,921	3.56	0.36					0.00
Tumble Grinding	20,921	0.00	0.00					0.01
Finish Grinding	20,921	0.02	0.01					0.14
Surface Coating Booth (gal)	14,000	4.32	4.32			24.50		
Total		95.75	49.36	0.21	0.10	52.80	0.00	0.36

Units marked with * are at their rated capacities. No additional limitation is being added.